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Commonwealth Care Alliance: Elderly and Disabled Care

A predominant impulse of managed care systems is to attempt to achieve savings not by redesign of care systems but by management overlays, benefit restrictions, and strong incentives to limit referrals to specialists and hospitals...We believe that a better approach is to innovate in care delivery with an emphasis on 'rationalizing' rather than 'rationing' care.¹

—Dr. Robert Master, President and CEO, Commonwealth Care Alliance

Before the nurses I had problems with my high blood pressure, weight, and pains in the legs. I couldn't breathe. My blood pressure is now much better for the attention at the clinic. Before I felt bad, now I'm going to exercise. Before I was depressed and went to the ER, now I can dye my hair.

—CCA Member, Brightwood Health Center

Dr. Robert Master, CEO of Commonwealth Care Alliance (CCA), was encouraged by the organization's progress over the past year. CCA, a nonprofit health plan and care delivery organization, had achieved an operating surplus while scaling up its operations considerably. In 2006, CCA had substantially increased membership in its Senior Care Options Plan, which served the medically vulnerable elderly, while launching a second health plan for non-elderly patients with complex care needs. Nearly all CCA members qualified for both Medicare and Massachusetts Medicaid benefits, a population known as "dual eligibles."

The Senior Care Options Plan was created under a special Massachusetts demonstration program that allowed pooling of monthly capitated Medicare and Medicaid payments. The plan, however, was scheduled to outgrow its demonstration status in 2009. While both Medicare and Medicaid would continue to back the plan, the terms of its flexible, pooled funding arrangement would be re-examined. Master hoped to convince Medicare and Medicaid to maintain the freedom to combine federal and state funding.

Health Insurance for Elderly, Disabled, and Low-Income Citizens

The Medicare program was established in the United States in 1965 to provide health insurance to people 65 and older and younger individuals with permanent disabilities. In 2007, approximately 37

Professor Michael E. Porter and Research Associate Jennifer F. Baron prepared this case. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

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million elderly and seven million younger disabled beneficiaries received health insurance through the program.

Medicaid, also established in 1965, provided free or low-cost health and long-term care coverage to certain categories of low-income Americans. Medicaid covered 55 million people in 2003, including 25% of children and 60% of nursing home residents.

In 2007, over seven million Americans were eligible for both Medicare and Medicaid benefits, accounting for about one in six Medicare beneficiaries and 14% of Medicaid enrollees.^{2,3} The dual eligible population consisted primarily of low-income elderly and disabled individuals, one-third of whom had significant limitations in activities of daily living.⁴ On average, dual eligibles had lower incomes, poorer health status, and higher probabilities of nursing home placement than other Medicare beneficiaries. (**Exhibit 1A:** Characteristics of Dual Eligibles versus Other Medicare Beneficiaries, **Exhibit 1B:** Distribution of Total Expenditures by Type of Service for Dual Eligibles)

The financing and delivery of Medicare and Medicaid benefits were separate for most dual eligibles, and some received Medicare and Medicaid benefits from different providers or health plans.^{5,6}

Medicare

Medicare benefit payments totaled \$374 billion in 2006, comprising 13% of the federal budget and nearly 20% of national health expenditures. Inpatient hospital services accounted for over one-third of Medicare benefit payments, followed by physician and other outpatient services at 24%. Average Medicare spending per beneficiary was \$5,694 in 2003, with per capita payments for the elderly nearly \$1,000 higher than for individuals under age 65. In 2003, 10% of beneficiaries accounted for over two-thirds of Medicare spending, while 52% of beneficiaries accounted for 2% of expenditures.

The Medicare program consisted of four parts, covering hospitalizations, physician services, and prescription drug benefits. Over 43 million people were entitled to Medicare Part A, a tax-funded benefit also known as the Hospital Insurance program. Part A coverage included inpatient hospital services, ambulance services for most emergency care, skilled nursing facilities,⁷ and home health and hospice care. Most beneficiaries were not required to pay Part A premiums, but were subject to a deductible before coverage began (\$992 per inpatient hospital stay in 2007), as well as certain cost-sharing requirements.

Medicare Part B, also called the Supplementary Medical Insurance program, covered services including outpatient physician and mental health care, home health care, preventive care, laboratory services, diagnostic tests, and durable medical equipment. Part B was a voluntary benefit requiring enrollees to pay monthly premiums (\$93.50 for beneficiaries with annual incomes under \$80,000 in 2007), a small annual deductible, and participate in cost sharing of 20% for most services. Nearly 41 million people were enrolled in Medicare Part B in 2007.

Medicare Part C, or the Medicare Advantage program, allowed Part A and B enrollees to receive benefits through private plans, such as HMOs or preferred provider organizations. Private Medicare Advantage plans received payments from Medicare to cover hospital and physician services for over eight million beneficiaries. In 2007, many Medicare Advantage plans also covered prescription drugs. Some Medicare Advantage plans, known as Special Needs Plans (SNP), targeted high-risk populations with complex and expensive health care needs. Virtually all Medicare Advantage plans received risk-adjusted payments from the federal government,⁸ with amounts based on the health status of each enrollee.⁹

Medicare Part D, an outpatient prescription drug benefit, was launched in 2006. Like Medicare Part B, enrolment in the prescription drug benefit was voluntary and required beneficiaries to pay monthly premiums. Private plans contracted with Medicare to deliver this benefit to nearly 24 million beneficiaries in 2007.

Medicare did not cover long-term institutional care services, private-duty nursing care, homemaker services, and most non-emergency transportation. Custodial services for help with activities of daily living such as walking, getting in and out of bed, dressing, using the bathroom, eating, or taking medicine were also not covered. Other uncovered services included routine dental care or dentures, routine vision care or glasses, and hearing exams or hearing aids.¹⁰

Medicare Special Needs Plans The Medicare Modernization Act created Special Needs Plans as a type of Medicare Advantage plan in 2003. SNPs were designed to allow private insurers to create health plans tailored to the needs of Medicare beneficiaries with serious and often multiple medical conditions.¹¹ Congress identified three populations eligible for Special Needs Plans: institutionalized individuals, those with severe or disabling chronic conditions, and dual eligibles.

SNP proposals from private insurers were evaluated on a case-by-case basis by the Centers for Medicare and Medicaid Services (CMS).¹² Over 460 SNPs were approved to operate in 2007, 310 of which enrolled dual eligibles.¹³ Most plans enrolled fewer than 500 individuals.¹⁴

As with other Medicare Advantage plans, risk-adjusted Medicare payments to insurers offering SNP plans were determined through a bidding process. Each plan submitted a bid covering all services, excluding drugs, for a “normalized” Medicare patient with a risk score of 1.0. Plans often based their bid amounts upon historical costs. Bids were compared to local Medicare benchmark payment rates for each state and county. When plans’ bids fell below their local benchmarks, Medicare retained 25% of the savings and allotted the balance to lower premiums, lower cost sharing requirements, or expand service coverage.

Medicare assigned a risk score to each enrollee using demographic factors such as age, gender, Medicaid eligibility, previous disability, and ICD-9 codes¹⁵ from Medicare claims. A score above 1 indicated that a patient was predicted to have higher medical expenses than the county average. The reimbursement amount was based on each member’s risk score and the plan’s bid amount for a normalized patient.

Also like other Medicare Advantage Plans, SNPs issued separate bids for Medicare Part D drug reimbursement. The drug benefit reimbursement benchmark was the weighted average of all health plan bids Medicare received, which health plans could not know in advance. Risk scores were applied to adjust drug payment levels for individual members.

Medicaid

Medicaid was operated by the states within broad federal guidelines. State Medicaid programs were required to cover certain populations, including pregnant women and children under six with family income below 133% of the federal poverty level (\$20,000 for a family of four in 2006), school-age children with family income below 100% of the federal poverty level, and most elderly and disabled Supplementary Security Income¹⁶ recipients.

Medicaid benefits varied considerably across states, but included mandatory services such as physician and hospital care, laboratory and x-ray services, screening and diagnostic services for individuals under 21, medical and surgical dental services, family planning, nurse midwife services, nursing facility services for adults, and home health care for nursing home-eligible patients.

Some states restricted certain benefits, required time-consuming prior approval, or charged patient co-payments. For example, while all Medicaid programs covered non-emergency transportation to some extent, all states limited coverage to particular populations, more than half required prior approval, seven required co-payments, and four limited the number or type of trips. All programs also covered some form of home health services to a sub-set of beneficiaries, with 37 states restricting the quantity or type of coverage, 35 requiring prior approval, and 12 requiring co-payments.¹⁷

States were allowed to charge Medicaid premiums and impose cost-sharing requirements subject to certain limitations. For example, states could not charge premiums to beneficiaries below 150% of the federal poverty level. Some services were also exempt from cost-sharing, such as preventive care for children, pregnancy-related care, family planning, emergency services, and care for institutionalized individuals.

Each state Medicaid program received federal matching funds for coverage of mandatory services and populations. Match rates ranged from 50% to 76%, with poorer states receiving higher rates. In 2007, the federal government funded about 57% of all Medicaid spending. For expanded services or populations, matching funds were provided only when approved by federal waivers. States virtually never modified their programs without federal approval.

In 2005, 4% of Medicaid beneficiaries accounted for nearly half of the program's \$317 billion total expenditures. About 70% of Medicaid spending was attributable to elderly and disabled beneficiaries, comprising 25% of enrollees. Over 34% of all Medicaid spending and 70% of Medicaid spending on dual eligibles was on long-term care services.¹⁸

For dual eligibles, Medicaid supplemented Medicare coverage by paying Medicare premiums and cost-sharing requirements, and covering services limited or excluded by Medicare such as long-term care, vision, and dental care. (**Exhibit 1C: Medicaid Expenditures for Dual Eligibles**) Until the Medicare Part D prescription drug benefit took effect in 2006, Medicaid also funded prescription drug costs for dually eligible beneficiaries.

Medicare Demonstration Programs

Since the early 1980s, a number of Medicare demonstration programs had tested new models in financing and care delivery for frail elders. Some of them targeted dual eligibles and were developed together with state Medicaid programs. Many programs used prepaid financing mechanisms to increase spending flexibility for patients with diverse care needs. Case management requirements were often included to promote continuity of care across providers.

Programs of All-Inclusive Care for the Elderly (PACE) Authorized by Congress in 1986, the PACE demonstration program used a team-based elderly care delivery model developed in the 1970s by the On Lok senior center in San Francisco. PACE targeted frail, elderly Medicare beneficiaries at risk for nursing home placement.¹⁹ Most care was delivered by teams of physicians, nurses, and case managers at adult day care centers.²⁰ Clinical staff were salaried PACE employees, not fee-for-service providers.

PACE plans received monthly capitated payments from Medicare and state Medicaid programs. Until 2004, capitated Medicare Advantage payments were multiplied by a fixed frailty adjustment of 2.39. In 2004, Medicare began to transition PACE to individually risk-adjusted payments for each beneficiary.²¹ While Medicaid eligibility was not required for PACE enrollment, nearly all PACE members were dual eligibles. PACE plans negotiated Medicaid payment rates for dually eligible members with the states.

PACE graduated from a demonstration program to a permanent Medicare provider type in 1997. The program's regulatory framework proscribed how the program should be operated, and included limited flexibility. An evaluation of PACE patients in their first year of enrollment found that their care cost slightly more than fee-for-service care. Other evaluations found that PACE patients used less nursing home and inpatient hospital care, and had lower mortality rates. In 2007, over 30 organizations throughout the United States offered PACE plans, with 2006 enrollment approaching 13,000 individuals.^{22,23}

Mass. Senior Care Options (SCO) Program Senior Care Options was a Medicare demonstration program created in 2003 in partnership with Massachusetts Medicaid. SCO was designed to improve flexibility and continuity of care for elderly dual eligibles without the restrictions that had impeded PACE's ability to grow to scale. Like PACE, SCO providers were organized into care delivery networks and member enrolment was voluntary.²⁴ In May 2007, three Massachusetts SCO plans operated through joint contracts with Medicaid and Medicare.

Dual eligibles accounted for nearly 50% of Massachusetts Medicaid spending, compared with a national average of 40%.²⁵ In 2003, approximately 60% of Massachusetts' 224,000 dual eligibles were elderly individuals with poor access to primary care who saw multiple specialist providers.²⁶ Elderly duals experienced higher rates of nursing home placement and hospitalization than standard Medicare beneficiaries.²⁷ Younger patients with complex, disabling conditions such as AIDS, spinal cord injury, severe mental illness, mental retardation, and multiple chronic illnesses comprised the remaining 40% of Massachusetts dual eligibles.²⁸

SCO eligibility was broader than PACE's, and did not require members to be nursing home certifiable. State-level home- and community-based waivers issued prior to SCO secured federal matching funds for certain normally uncovered Medicaid services to chronically ill, disabled, and elderly beneficiaries. The Massachusetts waiver aimed to avoid nursing home placement by offering home health aides, personal care services, housekeeping and chore services, skilled nursing care, home delivered meals, and transportation. The exact services offered depended on patients' needs and local availability.²⁹

Massachusetts law stipulated that SCO programs "provide or arrange to provide a comprehensive network of medical, health care and social services that integrates all components of care, either directly or through subcontracts."³⁰ SCO programs were required to offer all Medicare and Medicaid covered services, as well as additional benefits covered by the Massachusetts home- and community-based services waiver.

Organizations offering SCO plans received monthly risk-adjusted capitated payments from Medicare and Medicaid, and were allowed to pool funding from both sources. Normally, plans had to obtain Medicare and Medicaid waivers to combine payments, negotiations for which could be protracted. Medicare assigned payment levels for each SCO member on an individually risk-adjusted basis using the same methodology as Special Needs Plans.

Like Medicare, Massachusetts Medicaid payments were risk-adjusted, but by category rather than for each individual member. Medicaid assigned each SCO enrollee to one of 24 rating categories according to geographic location, dual or Medicaid-only eligibility, institutional or community setting, and clinical severity. The SCO contract required non-institutionalized patients to be sub-categorized as nursing home certifiable, having Alzheimer's disease or a chronic mental illness, or community well. Community well members typically had multiple co-occurring chronic and/or acute conditions, and were not "well" in the traditional sense but did not fall into the more severe categories. Institutionalized members were tiered by acuity of illness. (**Exhibit 2: Massachusetts Medicaid Reimbursement Rates by Category**)

Care Delivery for Elderly, Disabled, and Low-Income Citizens

Outside of the SCO program and similar demonstrations, care delivered to low-income, complex, elderly patients was widely acknowledged to be “fragmented.”^{31,32} A 2001 analysis of Medicare claims data estimated that an average beneficiary with at least one chronic condition saw eight different physicians per year.³³

More than one million dual eligibles were enrolled in Medicare Advantage plans and more than two million were enrolled in Medicaid managed care programs, both of which assigned or allowed patients to choose primary care physicians to coordinate their care.^{34,35} Patients were generally responsible for initiating their first and subsequent primary care appointments, as well as arranging for transportation to the physicians’ offices. Dual eligibles might see their primary care physicians between one and four times per year. Duals in fee-for-service plans were not required to have primary care physicians, and some did not obtain regular primary or preventive care.

Upon selecting primary care physicians, some new patients received initial intake assessments at their doctors’ offices. Initial assessments usually consisted of physical exams lasting up to 40 minutes, after which physicians might prescribe diagnostic tests or medications. Patients’ families and caregivers were often not included in physician visits and treatment plans, and there were rarely end-of-life directives until times of crisis.³⁶

Some physician offices had on-site laboratory services or pharmacies, with immediate testing and prescription pick-up availability. Otherwise, patients were asked to report to separate testing sites, usually at future dates. Prescriptions were called into local pharmacies for patients to collect.

Primary care physicians were not always notified when their patients required unplanned inpatient or emergency room care. However, emergency room staff often came to know individual dual eligibles on sight, as many sought frequent emergency care. Acute episodes were common, some of which were preventable by earlier care.³⁷

Physician referrals were often required to obtain specialty care, behavioral health services, prescription drugs, physical therapy, some diagnostic tests, and home-based care. Patients usually scheduled their own appointments, as well as any follow-up primary care visits.

The extent to which providers communicated and shared patient records was variable.³⁸ Some primary care physicians routinely shared patient information with specialists or other providers upon referring their patients for services. Others shared records upon request. Specialists also had a range of policies regarding whether and how patient information was communicated to primary care physicians. Various types of electronic medical record systems were in use, while many providers maintained paper-based patient records. Dual eligibles often had multiple patient records housed at different provider sites.

Frail elderly patients experienced difficulty understanding the scope of available support services, how to obtain them, and the applicable costs and subsidies. According to a national survey, patients’ family and friends were the most common sources of information about support services.³⁹ Nearly two-thirds of non-institutionalized individuals with functional limitations relied on informal care from family, friends, and volunteers, with fewer than 10% using exclusively formal, paid care.⁴⁰

Commonwealth Care Alliance

The Commonwealth Care Alliance (CCA) was a nonprofit health plan and delivery system founded in 2003 by Dr. Robert Master under the Massachusetts Senior Care Options program.

Master, a physician with nearly three decades of experience caring for low-income, elderly, and disabled patients, created CCA to “bring high-quality and personalized care to people with complex medical and behavioral health needs, resulting in improved health and better self-management of chronic illness, thereby reducing hospitalizations and institutionalizations.”

Commonwealth Care operated two health plans, the Commonwealth Care Connection and the Senior Care Options Plan (SCP). CCA’s target members included the elderly, physically and developmentally disabled, and people with multiple chronic illnesses. CCA employed 26 administrative and 10 management personnel involved in executive management, financial planning and reporting, program coordination and development, operations, regulatory affairs and compliance, and human resources functions.

The Senior Care Options Plan, established in 2004, served Massachusetts residents over age 65 with complex health care needs. In May 2007, over 90% of SCP’s 1,154 members were dual eligibles, while the rest had only Medicaid coverage. The Commonwealth Care Connection plan, started in 2006, was open to dually eligible Massachusetts residents with severe disabilities. Roughly 80% of the plan’s 145 enrollees had developmental disabilities or mental retardation, and 20% had other types of disabilities.

Although CCA contracted with outside providers to deliver the majority of care, CCA also directly provided some primary care through two nonprofit clinical subsidiaries, the Commonwealth Clinical Alliance d/b/a Community Healthcare Group and Boston’s Community Medical Group (BCMG). The Community Healthcare Group employed 30 nurse practitioners, nurses, behavioral health clinicians, medical assistants, and other clinical and administrative support staff. All of its clinical employees were “wraparound” staff based at three of CCA’s eight contracted primary care sites. Wraparound staff would be added at additional primary care centers in late 2007.

BCMG was a nonprofit group practice serving disabled Medicaid or Medicare beneficiaries, including CCA health plan members and 450 members of Neighborhood Health Plan, whose membership included a large number of severely disabled Massachusetts Medicaid beneficiaries.

CCA also ran a fee-for-service Medicaid Pilot program serving 400 patients with serious chronic illnesses and behavioral health issues at the Brightwood Health Center in Springfield.

CCA had recorded revenues of \$27 million and net income of \$1.85 million in fiscal year 2006, up from \$13.3 million and \$780,000 in 2005. (**Exhibit 3:** CCA Financial Highlights for the Years Ending September 30, 2006 and 2005) Profitability in the first half of fiscal 2007 was on pace to exceed the prior year’s results.

History

CCA’s origins dated back to Boston City Hospital in 1973 when Master completed his medical residency. Master teamed with Boston City Hospital physician Dr. Roger Mark on a National Science Foundation grant to study inner-city Medicaid-eligible nursing home residents’ access to care. Master and Mark found physician responsiveness to nursing facility residents’ care needs to be inadequate, leaving the teaching hospital as the only recourse for all problems. The two physicians wondered whether ongoing primary care could come to those patients through a system of on-site visits by nurse practitioners. To test the idea, they created an informal nurse practitioner training program at Boston City Hospital similar to primary care instruction for medical students, and hired graduates of the program to care for Medicaid patients in inner city nursing homes and residences.

Urban Medical Group

Master and Mark were convinced that the nursing home visit program was improving high-risk patients' access to care and reducing their rate of emergency room visits and hospitalizations. In 1977, Mark, Master and a small group of physicians and nurse practitioners created the Urban Medical Group (UMG), a primary care practice utilizing the home visit model for low-income and chronically ill homebound elders and younger disabled individuals. The practice, which would later become a CCA primary care site, entered into a special fee-for-service contract with Massachusetts Medicaid to reimburse the home visits.

By 1980, UMG was achieving promising results. The average annual hospitalization rate for ambulatory elderly patients was 559 days per 1,000 patients, compared with an expected rate of 1,300 days.^{41,42} UMG nursing home patients also experienced a proportional decrease attributed to fewer inpatient admissions and shorter average lengths of stay.ⁱ

The Community Medical Alliance

Master was pleased by UMG's results and believed many more complex patients could benefit from the practice's care delivery philosophy. He began to contemplate ways to scale up the model while addressing some of its weaknesses, particularly the complexity of managing regulations and funding streams from both Medicare and Medicaid.

By 1989, after a three-year term as Medical Director of Massachusetts Medicaid, Master had developed a firsthand understanding of state programs and personal relationships with senior officials. Master convinced Bruce Bullen, the state Medicaid Commissioner, to approve a prepaid, capitated Medicaid managed care plan for severely disabled and HIV-positive patients as a demonstration pilot. Master believed that a "Medicaid HMO" would increase flexibility of spending, allowing coverage of non-traditional services (like the home visits) to high-risk, expensive members.

In 1990 Master founded the Community Medical Alliance. Non-traditional covered benefits included home health care, durable medical equipment, home infusion therapy, mental health and substance abuse treatment, adult day health, and case management.⁴³

Each Community Medical Alliance member had a designated primary care physician and nurse practitioner who worked together to manage the patient's care. Nearly 90% of severely disabled member visits occurred at patients' homes. Both physicians and nurse practitioners were authorized to order services throughout the Community Medical Alliance provider network.

Condition-specific, risk-adjusted capitated reimbursement scales did not exist in 1990. State Medicaid Commissioner Bullen fully supported the pilot initiative, and developed experimental risk-adjusted premiums based on Medicaid's actual fee-for-service expenditure for beneficiaries with HIV/AIDS and severe physical disabilities. In collaboration with Master, Bullen persuaded the Health Care Financing Administration (CMS' predecessor) to approve the nation's first risk-adjusted capitation rates. Subsequently, Master worked with Richard Kronick, former colleague and prior Director of Massachusetts Medicaid Policy and Reimbursement, to construct a more systematic approach to capitated reimbursement levels based on claims data for the medically disabled.

Community Medical Alliance per member per month medical care costs for members with severe physical disabilities fell from \$2,228 in 1991 under fee-for-service reimbursement to \$1,207 in 1996

ⁱ Elderly UMG patients receiving home care were hospitalized 37% more days than a benchmark elderly patient population, but the benchmark group was not necessarily chronically ill or home-bound and UMG did not consider it to be representative of its patients.

under capitated reimbursement. Similarly, in later years, an evaluation of pre- and post-capitation per member per month spending for 104 low-income chronically ill individuals with a range of disabling conditions at the Brightwood Health Center indicated an average decrease from \$1,281 under fee-for-service reimbursement to \$1,077 under capitation.⁴⁴ Average per member per month costs for the 14 most expensive Brightwood individuals under fee-for-service reimbursement declined from over \$9,000 to under \$2,500 under the capitated system. (**Exhibit 4: Changes in Costs for the Most Expensive Brightwood Health Center Members**)

In 1996, the Community Medical Alliance was acquired by Neighborhood Health Plan, a Massachusetts HMO with a large population of Medicaid beneficiaries. Neighborhood Health hoped to expand the Community Medical Alliance's team-based, flexible care delivery model to its disabled members. However, the merger proved difficult; by 2002, the Community Medical Alliance model had not been expanded to the generally disabled population. With Neighborhood Health in serious financial difficulty, Master left the company to found the Commonwealth Care Alliance to put the Community Medical Alliance approach into broader practice. Neighborhood Health's Vice President for Care Delivery Systems, Lois Simon, became Chief Operating Officer of the new organization.

The Senior Care Options Plan

The Commonwealth Care Alliance Senior Care Options Plan was a voluntary health plan offering all Medicare and Massachusetts Medicaid benefits to high-risk, mostly dually-eligible members. Enrollment was open to individuals at least 65 years old, eligible for or enrolled in Massachusetts Medicaid, and living within the CCA service area.

Most new CCA members learned about the Senior Care Options Plan from their existing primary care providers, often community health centers within the CCA network. When a patient expressed interest in joining SCP, a nurse practitioner from the primary care provider obtained the patient's permission to contact CCA and confirm eligibility.

Coverage

The plan frequently covered non-traditional items related to the medically and socially vulnerable states of its members, including transportation to medical appointments, assistance with daily chores, personal care attendant services to assist with activities of daily living, dementia and social day care, and personal emergency response systems. Such services were available at no cost to SCP members when authorized by their primary care physicians or teams. Contracted primary care providers did not have to seek CCA approval before arranging for care or ancillary services. In the words of one nurse practitioner:

Our contract with CCA was written with lots of freedom. CCA basically told us that providers would be reimbursed for whatever we thought was appropriate, so we don't think about that when prescribing care. We have authorized acupuncture, massage, and in one case transportation to church on Sundays.

The great majority of SCP members received Medicare Part D prescription drug benefits through the plan. CCA also covered prescription drug costs for the roughly 8% of Medicaid-only SCP beneficiaries. Drug coverage was administered through a network of 1,050 pharmacies in Massachusetts, as well as 53,710 locations nationwide for patients traveling outside Massachusetts. SCP members were not responsible for any drug co-payments, regardless of personal income.

Payers

Commonwealth Care Alliance received monthly capitated premium payments from Medicaid for all SCP members, and separate monthly capitated payments from Medicare for dually eligible members. Medicare payments included both Medicare Advantage and prescription drug coverage.

CCA grouped its SCP members into four SCO program designations according to clinical severity: patients in institutional settings; patients living at home but eligible for nursing home care according to Medicaid criteria; patients with Alzheimer's disease or another chronic mental illness; and relatively well, generally ambulatory patients with a common array of aging-related chronic care conditions. SCP members' average risk score across all four groups was 1.79, ranging from an average of 1.44 for community well enrollees to 2.16 for nursing home certifiable patients.⁴⁵ Individual risk scores ranged from slightly over 1.0 for some community well members to 10 or higher for the frailest patients. (**Exhibit 5: Senior Care Plan Case Mix Intensity**)

CCA believed that some risk scores and associated reimbursement levels were too low because they were based on annual medical claims and encounter reports. Physicians did not always note permanent conditions such as quadriplegia on all reports because the conditions had not changed. CCA had begun to encourage primary care physicians to reflect the full extent of patients' medical conditions on every encounter form.

As low-income beneficiaries, SCP members were not required to pay Part D premiums or co-payments as long as their plans' bids were below the Medicare benchmark. CCA did not require SCP members to pay for drugs under any circumstances. If CCA's Part D bid exceeded the benchmark, CCA paid SCP members' Part D premiums in full.

CCA's capitation revenue was \$26 million in 2006, more than double 2005 levels due to membership growth, 68% from Medicare and 32% from Medicaid. CCA estimated that 55% of an anticipated \$40 million in capitation revenue for fiscal year 2007 would come from Medicare, largely due to the 2006 introduction of Medicare Part D.

Provider Network

Nearly all non-emergency SCP services were delivered by providers within CCA's contracted network. In May 2007, CCA contracted with eight primary care sites, five hospital systems, and various extended care facilities to provide primary, acute, specialty, rehabilitative, and institutional care. CCA also contracted with provider networks to deliver home care, durable medical equipment, behavioral health, and community-based services (e.g., home health aides; personal care attendants; and transportation, chore, and meal delivery services).

Particularly in the Boston area, CCA had pre-existing relationships with many SCP primary care sites, including the Urban Medical Group, Upham's Corner Community Health Center, Boston University Geriatrics (part of the former Boston City Hospital), and CCA clinical subsidiary Boston's Community Medical Group. Contracted primary care sites served anywhere from three to over 300 SCP patients.

Additional sites were selected on the basis of geography and experience working with high-risk elderly patients. Sites' willingness to adopt CCA's care delivery model was also important. CCA's ability to expand geographically was limited by the number of providers experienced with CCA's patient group and delivery approach, especially outside of Boston. Many primary care sites serving SCP-eligible patients faced financial and human resource constraints, such as a lack of electronic medical records or funding to adopt them. In some cases, CCA contracted with practices that did not

follow its care delivery model but agreed to work towards full implementation over time with CCA guidance.

Upon contracting with a primary care provider, CCA reviewed the site's relationships with inpatient and specialty care providers as well as social and behavioral health services. CCA preferred to contract with those providers to maintain existing relationships and continuity of care.

In 2007, most CCA primary care providers were located in the Boston area. CCA also contracted with the Elder Service Plan North Shore in Lynn, 10 miles north of Boston, and Brightwood Health Center in Springfield, 90 miles southwest of the city. Network hospitals were located in Boston, Lynn, and Springfield. CCA was in the process of contracting with four new primary care sites that would expand its coverage area north and west of Boston.

Care Delivery

A new SCP patient was assigned to a primary care team consisting of at least one physician and at least one nurse practitioner or physician assistant with expertise working with frail elderly patients. Primary care teams also included elderly care social workers, known as geriatric support services coordinators, responsible for linking patients with services enabling them to live independently.

If the new member was already the patient of a contracted SCP primary care site, that patient could keep the same primary care physician. Some primary care sites maintained permanent teams that worked together to care for groups of patients, while others assembled teams on a patient-by-patient basis. Assignments were based primarily on case load and the location of the patient's residence to facilitate home visits. A typical nurse practitioner served between 40 and 65 patients.

Most primary care staff were employed by the primary care sites. CCA employed supplemental clinical and support professionals at three primary care sites, with most wraparound staff based at the Brightwood Health Center in western Massachusetts. Additionally, the Massachusetts SCO program required CCA to contract with geriatric support services coordinators employed by Aging Service Access Points⁴⁶ to ensure a minimum experience level.⁴⁷ Each primary care center had from one to three geriatric coordinators, depending on patient volume. These primary care team members split their time between the health centers and the Aging Service Access Points that employed them.

New patients were evaluated through a comprehensive intake evaluation assessing medical, behavioral, and social circumstances. The evaluation was usually conducted by nurse practitioners. Geriatric support service coordinators also evaluated patients' ability to perform activities of daily living to determine their need for community-based long-term care services such as transportation, adult day care, and meal preparation and delivery. Some initial consultations were performed in patients' homes, where the safety of the home environment and degree of family or caregiver support were examined. A physician assistant new to CCA commented:

Now I can see how many things I probably missed before. You can't always tell from an office visit if a patient needs a walker or doesn't have adequate family or caregiver support. Plus, if you don't have an ongoing sense of patients' baseline health, you might think they are sicker than they are based on just an office visit.

After the initial assessment, a patient met with the primary care physician. This and subsequent physician visits were normally initiated by nurse practitioners and scheduled by administrative staff. Physician appointments usually occurred at the health centers, but some providers scheduled physician home visits for patients with limited mobility. The frequency of physician visits varied, as

did appointments with geriatric support services coordinators who reassessed patients' community-based long-term care needs through home or office visits at least twice per year.

Nurse practitioners served as patients' main points of contact for care delivery and provided the majority of primary care services. Seriously ill or disabled patients saw nurse practitioners as often as weekly, with a minimum of four annual check-ups for more stable patients. According to one physician and health center Medical Director:

Before SCO, I normally saw elderly and disabled patients for 20-minute visits four times a year under fee-for-service Medicaid or Medicare. Any doctor would fail under that system; I failed under that system. We evaluated patients, ordered tests, re-adjusted drug regimens. Many patients never got the tests, and if they did we didn't always get the results. We didn't know if they were taking their medications. The fee-for-service model is designed for self-sufficient patients who can schedule their own appointments and manage their own care. Now with SCO, I still may see most patients four times a year. But between appointments, the whole team has been at work. I am not the head of the primary care team, the nurses are.

Since SCP members were medically vulnerable and some also had unstable living situations, even short delays could lead to serious complications and exacerbate symptoms or disease severity. Patients were instructed to call their nurse practitioners and geriatric support services coordinators with any questions or concerns about health, treatment, housing, family, transportation, and other topics affecting their day-to-day lives. Nurse practitioners built time into their schedules for unscheduled home visits or other unplanned same-day appointments, including weekend hours. Primary care physicians also communicated with SCP patients by phone. A physician was on call for emergency consultations or advice twenty-four hours a day, seven days a week.

Personal care attendants were provided to some SCP patients requiring regular assistance with non-medical activities of daily living. Geriatric support service coordinators assessed patients' functional abilities and determined the number of weekly personal care attendant hours needed. Patients were free to select their own attendants, including friends or family members. Attendants were hired by and reported directly to patients (or designated proxies, usually family members), and were paid by CCA. Nurse practitioners and geriatric support service coordinators maintained phone and in-person contact with attendants, monitored their performance and updated them on medication changes, upcoming appointments, and general health status.

Some patients requiring more frequent clinical assistance than could be provided by their primary care teams were given skilled nursing assistance. Nurse practitioners evaluated the number of skilled nursing hours each patient needed per week, and scheduled regular nurse visits with an agency in the CCA network.

Some primary care sites directly employed social workers, physical and occupational therapists, and durable medical equipment specialists (e.g., wheelchairs, home and medical equipment). When space or financial constraints prohibited primary care sites from internally staffing such positions, CCA contracted for these types of care. Nurse practitioners typically determined the level of care needed and coordinated patients' appointments. Some of these staff members maintained offices at the primary care sites and were available to conduct home visits when needed, while others saw SCP patients at their off-site offices.

Some sites held weekly meetings with all primary care teams. Physicians updated the group on the status of patients currently in the hospital; patients approaching hospital, nursing home, or rehabilitation facility admission or discharge; or patients who had visited the emergency room since the last meeting. Staff were encouraged to discuss the cases that had been presented, and ask general

medical, management, or safety-related questions about any of their patients. Some weekly meetings were themed, for example one site invited the behavioral health staff to participate in one meeting per month and the physical therapy coordinator to attend another.

Outside of weekly meetings, communication within and across teams occurred via voicemail, email or electronic notes, and in-person conversations. Nurse practitioners and other staff performing home visits could page physicians to discuss unexpected or complicated findings.

The size and layout of primary care offices ranged from large clinics with many physician offices and exam rooms to much smaller centers. For example, Boston's Community Medical Group maintained minimal, shared office space with one handicap-accessible examination room and limited on-site medical equipment. The practice served the severely disabled and conducted most consultations at patients' homes. The Brightwood health center was a larger clinic with more than a dozen exam rooms, staff offices, conference and meeting space, and an on-site pharmacy.

Many network pharmacies provided domestic delivery service to patients' homes, and the plans also offered mail-order delivery options for chronic or long-term medical conditions.

Specialty and Inpatient Care

Both physicians and nurse practitioners could refer SCP patients to inpatient or specialty care providers. Each primary care site usually referred patients to a single hospital and a select group of preferred specialists with whom it maintained relationships.

Primary care site administrative staff coordinated patients' appointments and arranged transportation and language interpretation services. Primary care physicians contacted hospital or specialty care clinicians to discuss care plans before scheduled patient visits. Nurse practitioners accompanied some severely disabled patients to specialist appointments.

Most hospital admissions were unplanned. Patients often called their nurse practitioners or primary care physicians prior to seeking emergency care. Primary care staff determined whether an emergency room visit was advisable, either through a telephone consultation or a home visit. When primary care teams were not notified in advance of hospital admissions, emergency room staff usually contacted them when a SCP patient arrived at the hospital. Given past relationships, emergency room employees and hospital physicians frequently knew which primary care center to contact without asking the patient. Primary care physicians or nurse practitioners often visited SCP patients in the hospital within 48 hours of admission, or designated an on-call physician to visit all of that health center's hospitalized patients on a given day. CCA nurse practitioners scheduled patient home or office visits within two days of a hospital discharge.

Primary care physicians and nurse practitioners approved patient transfers to rehabilitation facilities, where patients were under the direct care of rehabilitative medical staff. Primary care center nurse practitioners often conducted non-medical, follow-up visits to patients receiving rehabilitative care and coordinated the services required upon discharge.

Chronic Disease Self-Management

In 2007, CCA was expanding its care delivery approach to include chronic disease self-management workshops to increase patient involvement in their health and health care. CCA learned about the Stanford Model of Chronic Disease Self-Management Program through its participation in an elder care coalition, whose membership included agencies linking elderly residents to nursing home, mental health, nutrition, financial management and other services in northern Massachusetts. The self-management program taught participants with various and often

multiple chronic conditions to manage their treatment and maintain their ability to engage in daily activities. Sessions were led by two instructors who had completed a weeklong training program at the Stanford School of Medicine. At least one instructor was typically a member of the target population. CCA sent two staff members, one of whom had a chronic condition, to become certified program leaders and trainers. Both were trained to lead the program in English and Spanish.

CCA held its first two CDSMP workshops at the Brightwood Health Center in late 2006. The programs were taught in Spanish to a total of 26 elderly SCP members identified by their primary care teams. Participants had one or more chronic conditions including diabetes, depression, arthritis, chronic obstructive pulmonary disorder, physical disabilities, and high blood pressure.

Participants attended six weekly, two-and-a-half hour sessions on topics including techniques to deal with frustration, fatigue, pain, and isolation; exercise for maintaining and improving strength, flexibility, and endurance; appropriate use of medications; effective communication with family, friends, and health professionals; nutrition; and making informed treatment decisions. Program content did not target particular diseases, and was intended to teach problem-solving skills relevant to all chronic conditions. Participants worked with instructors to develop individual action plans with goals specific to their health status.

Patient evaluations of the program were positive, with individual results including reduced insulin dependency for diabetes, improved mobility, weight loss, and increased exercise. CCA planned to track participants' longer-term health status and benchmark their results to patients who did not attend the program. CCA also intended to compare patients' pre- and post-program health status.

CCA planned to teach its first English language sessions in 2008, and translate the materials into languages widely spoken by SCP members, including Russian, Portuguese, and Cape Verdean. Longer-term, CCA planned to expand the program to all of its primary care sites by training staff at each site to be instructors.

Information Technology

CCA compiled cost and quality statistics from patient claims information, roughly two-thirds of which were manually entered each week into a Microsoft Excel-based database developed and used internally by CCA staff. Approximately one-third of claims were electronically reported to the database through an automated service provided by a third-party firm acting as an e-claims clearinghouse. Providers could access the database with a secure sign-on feature via the internet, and two sites had requested access to the system. The database's two columns listed "patient information" and "medical expense information." The patient information column was organized by hierarchical categories, including fields for each patient's name, gender, race, primary care physician and health center, other care delivery sites, and Medicare and Medicaid capitation rates. Categories could be added, sorted, and reorganized within the hierarchy using standard Excel functions.

Information could be sorted and analyzed across the two columns, for example medical expenses could be examined for all members within a particular Medicaid patient category, such as nursing home certifiable members. CCA did not use the system to analyze clinical information beyond patients' Medicaid risk scores (or using premiums as proxies for disease severity), but additional fields for patient diagnoses or other clinical information could easily be added.

CCA created electronic health records for its members using a password-protected, web-accessible software program. Nurse practitioners at provider sites keyed-in patient information following their

patients' primary, inpatient, and specialty care visits, and attached documents (e.g., test results) to form patient records. Each patient record consisted primarily of Microsoft Word documents and scanned files, limiting the ability to search. On-call CCA nurses and physicians had 24-hour access to members' records, and were always available to provide patient information to hospitals and emergency care providers outside of business hours.

Contracted provider sites maintained separate patient records, which were paper-based in most cases. Provider sites without electronic records were required to employ an alternate system guaranteeing patient and provider access to member information at any time.

In 2007, many of the larger providers and those affiliated with hospitals and health systems had adopted or were moving toward differing electronic health records systems, although none had plans to input historical records into the electronic system. For example, the Brightwood primary care center used the Baystate Health system electronic patient record program. Brightwood nurse practitioners updated patient records following primary care visits or medication changes, which could then be viewed by other providers within the Baystate system. Nearly all Brightwood SCP patients received laboratory tests, imaging, and inpatient services from Baystate providers. Medical correspondence and outpatient specialist consultations from providers outside the Baystate system were not automatically included in Brightwood patients' electronic records. Commonwealth Care estimated that it would cost CCA and each participating provider between \$50,000 and \$100,000 to make the disparate electronic health record systems interoperable through one of two major standardization formats. The desired interoperability would also require considerable hospital system cooperation and prioritization to achieve results.

Results Measurement

Medical and administrative cost ratios were commonly-used metrics to evaluate health plan efficiency. The SCP's medical expense ratio, relating medical expenses to premium revenues, was 74% in fiscal year 2005 and 76% in 2006. Ratios for typical publicly-held US health insurers ranged from 78% to 86% in 2006, with comparable ratios for Medicare costs.⁴⁸ During the first half of fiscal 2007, SCP's medical expense ratio rose to 81%. CCA attributed the increase to two factors: further investment in primary care capacity to accommodate membership growth, and the decision to maintain larger reserves as a precautionary measure against unpaid or underpaid premiums.

The SCP administrative cost ratio, calculated by dividing administrative expenses by premium revenue, was 15% in fiscal year 2006 and the first half of 2007, with typical managed care plans in the 10% to 12% range. CCA expected its ratio to rise in fiscal year 2007 due in part to a planned expansion of administrative staff.

Each contracted primary care site received quarterly site reports from CCA containing the individual provider's costs, service utilization, process metrics, and case mix intensity by Medicare risk score. Site reports compared each site's total per member per month medical expenses with CCA's entire SCP population across the four SCO program rating categories: institutional, community well, Alzheimer's/chronic mental illness, and nursing home certifiable. Reports also compared the provider's average per member per month costs by type of care with the CCA SCP population. (**Exhibit 6: Total Medical Expenses from Sample Senior Care Plan Primary Care Site Report**)

When a site report exhibited undesirable trends, CCA met with the site's staff to discuss the results. For example, in early 2007 one site demonstrated very high 30-day hospital readmission rates. CCA drew the provider's attention to the data and met with its staff to devise an intervention.

CCA planned to closely monitor the site's progress over the coming year. (**Exhibit 7: Senior Care Plan Expenses by Severity Level**)

"Disease rosters" compared the individual primary care site's patients to the aggregate CCA SCP population across process metrics for medical conditions common to Senior Care members. For example, a coronary artery disease roster noted how many CAD patients at the site had received lipid profiles and blood glucose screens in the previous year, and compared the site's metric to an aggregate statistic for all SCP members. Disease rosters included measures for diabetes, congestive heart failure, chronic obstructive pulmonary disorder, depression, dementia, and coronary artery disease. (**Exhibit 8: Performance Metrics by Primary Care Site, Sample Site versus CCA Overall**) CCA also reported the provider's rate of congestive heart failure hospitalizations per 1,000 member years compared to the CCA average and the Massachusetts Division of Health Care Finance benchmark rate of 21.1 preventable hospital admissions per 1,000 member years for CHF patients 65 and older.

Provider Reimbursement

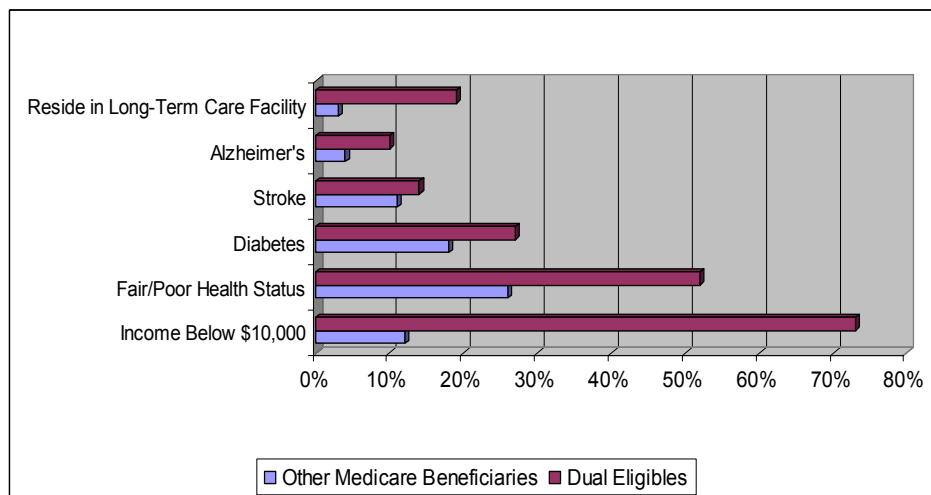
Primary care sites contracted with CCA through two types of payment arrangements. Three sites received prepaid, capitated payments for primary care and all other services. These sites served the largest numbers of CCA patients and had deep experience serving the frail elderly population. These three sites also participated in up- and down-side risk-sharing agreements, although the provider organizations to which they belonged, not the individual health centers, assumed the financial risk. In 2007, one site participated in full risk sharing with CCA, retaining all savings and covering all costs in excess of capitated payments. Two sites had partial risk sharing agreements, keeping a proportion of savings and covering a proportion of expenses exceeding their capitated payment amounts.

The remaining primary care sites received prepaid capitated payments only for primary care and care coordination services. These sites had upside-only risk-sharing agreements with total amounts capped at an established percentage of capitated payments. Sites earned upside bonuses on the basis of medical expense ratios, relating medical expenses to premium payments. Most providers regularly exceeded their medical expense ratio benchmarks. Excluding bonuses, CCA capitated payments often exceeded the amounts the same primary care sites received under fee-for-service arrangements with other health plans.

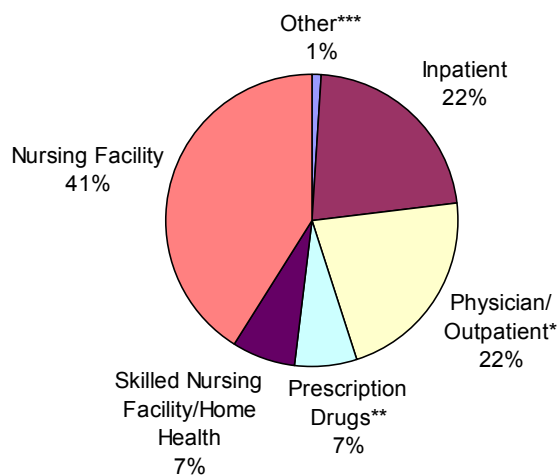
Hospital, specialist, and other non-primary care services were reimbursed separately. Hospitals were paid using a prospective system mirroring fee-for-service amounts. CCA grouped hospital claims by DRG and reimbursed providers using Medicare rates. Specialists and other providers were paid on a no-risk fee-for-service, per diem, or per-visit basis.

Future Challenges

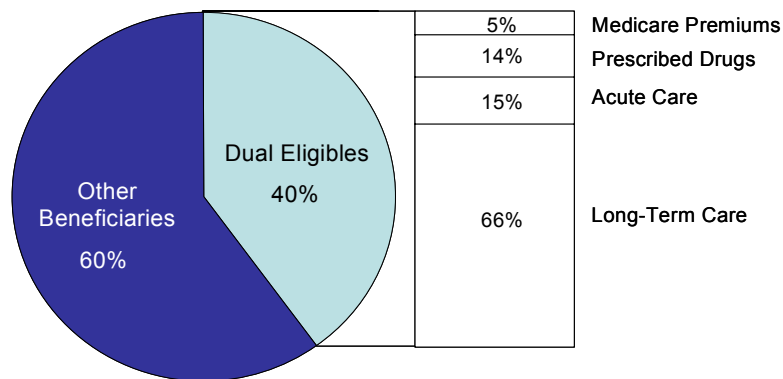
Master remained convinced that the SCP plan was improving its members' lives. CCA's plans to increase enrollment and expand its geographic coverage area would extend the organization's care delivery model to even more Massachusetts duals. However, scaling would require capital and new relationships with providers. Master wondered how a larger program would affect CCA's personalized, high-touch culture. Also, the Massachusetts SCO program was scheduled to lose its demonstration status in less than two years, presenting Master with the challenge of maintaining the terms of CCA's flexible funding model under the new arrangement.

Exhibit 1A Characteristics of Dual Eligibles versus Other Medicare Beneficiaries, 2002

Source: "Dual Eligibles: Medicaid's Role for Low-Income Medicare Beneficiaries," (#4091-04), The Henry J. Kaiser Family Foundation, July 2005.

Exhibit 1B Distribution of Total Expenditures by Type of Service for Dual Eligibles, 2000

Source: Kaiser Commission on Medicaid and the Uninsured, from KCMU estimates based on analysis of MCBS Cost & Use, 2000.

Exhibit 1C Medicaid Expenditures for Dual Eligibles, 2003

Source: Urban Institute estimates for KCMU based on an analysis of MSIS and Financial Management reports (CMS form 64); published in "Dual Eligibles: Medicaid's Role for Low-Income Medicare Beneficiaries," (#4091-04), The Henry J. Kaiser Family Foundation, July 2005.

Exhibit 2 Massachusetts Medicaid Reimbursement Rates by Category, 2007

Patient Residential Status	Region and Rating	Dual Eligible*	Severity	Reimbursement per Month
Institutional	Tier 1	Y	Tier 1	\$4,641.15
Institutional	Tier 1	N	Tier 1	\$4,641.15
Institutional	Tier 2	Y	Tier 2	\$6,604.95
Institutional	Tier 2	N	Tier 2	\$6,604.95
Institutional	Tier 3	Y	Tier 3	\$8,368.60
Institutional	Tier 3	N	Tier 3	\$8,368.60
Transition	Transition to Community	Y	Tier 1	\$4,641.15
Transition	Transition to Community	N	Tier 1	\$4,641.15
Community	Boston	Y	Other	\$161.49
Community	non-Boston	Y	Other	\$168.15
Community	Boston	N	Other	\$938.80
Community	non-Boston	N	Other	\$771.16
Community	Alzheimer's/ Mental Illness, Boston	Y	AD/ CMI	\$616.23
Community	Alzheimer's/ Mental Illness, non-Boston	Y	AD/ CMI	\$654.75
Community	Alzheimer's/ Mental Illness, Boston	N	AD/ CMI	\$2,468.46
Community	Alzheimer's/ Mental Illness, non-Boston	N	AD/ CMI	\$2,083.47
Community	Nursing Home Certifiable, Boston	Y	NHC	\$2,738.59
Community	Nursing Home Certifiable, non-Boston	Y	NHC	\$2,993.15
Community	Nursing Home Certifiable, Boston	N	NHC	\$7,404.45
Community	Nursing Home Certifiable, non-Boston	N	NHC	\$6,578.59
Transition	Transition to Institutional, Boston	Y	NHC	\$2,738.59
Transition	Transition to Institutional, non-Boston	Y	NHC	\$2,993.15
Transition	Transition to Institutional, Boston	N	NHC	\$7,404.45
Transition	Transition to Institutional, non-Boston	N	NHC	\$6,578.59

Source: CCA documents.

Exhibit 3 CCA Financial Highlights for the Years Ending September 30, 2006 and 2005

Includes Commonwealth Care Alliance, Inc., Commonwealth Clinical Alliance, Inc., and Boston's Community Medical Group, Inc. in a combined statement of activities.

	2006		2005	
		(% of total revenues)		(\$ of total revenues)
Capitation revenue	\$25,678,990	(95%)	\$11,740,957	(88%)
Interest	\$164,199	(1%)	\$36,182	(0%)
Other income (largely Brightwood Pilot)	<u>\$1,171,153</u>	(4%)	<u>\$1,566,160</u>	(12%)
Total unrestricted operating revenue	\$27,014,342	(100%)	\$13,343,299	(100%)
Operating expenses				
Clinical expenses	\$20,824,228	(77%)	\$9,932,162	(74%)
Salaries, wages, payroll taxes, and fringe benefits	\$1,371,566	(5%)	\$744,234	(6%)
Other administrative costs	\$939,794	(3%)	\$782,223	(6%)
Claims adjudication	\$827,511	(3%)	\$317,618	(2%)
Information services	\$963,752	(4%)	\$264,332	(2%)
Depreciation and amortization	\$213,029	(1%)	\$80,330	(1%)
Interest	<u>\$24,024</u>	(0%)	<u>\$9,276</u>	(0%)
Total operating expenses	<u>\$25,163,904</u>	(93%)	<u>\$12,130,175</u>	(91%)
Increase in unrestricted net assets	\$1,850,438	(7%)	\$1,213,124	(9%)

Source: CCA Annual Report 2006.

Exhibit 4 Changes in Costs for the Most Expensive Brightwood Health Center Members

	Cost per member per month for fee-for-service reimbursement	Cost per member per month for capitated reimbursement
Inpatient	\$7,774.00	\$709.37
Outpatient	\$265.76	\$48.84
Emergency Room	\$36.86	\$38.44
Physician	\$404.32	\$327.45
Transportation	\$25.45	\$28.67
Pharmacy	\$608.49	\$544.66
Behavioral Health	\$33.20	\$204.41
Other Medical Costs	\$229.72	\$464.01
Cost of Intervention	N/A	\$85.64
Total	\$9,377.80	\$2,451.49

Source: Tobias, Carol, Jan Levinson and Lois Simon, *Reinventing the HMO: The Next Generation of Medicaid Managed Care*, Resource Paper, Center for Health Care Strategies, Inc., August 2005.

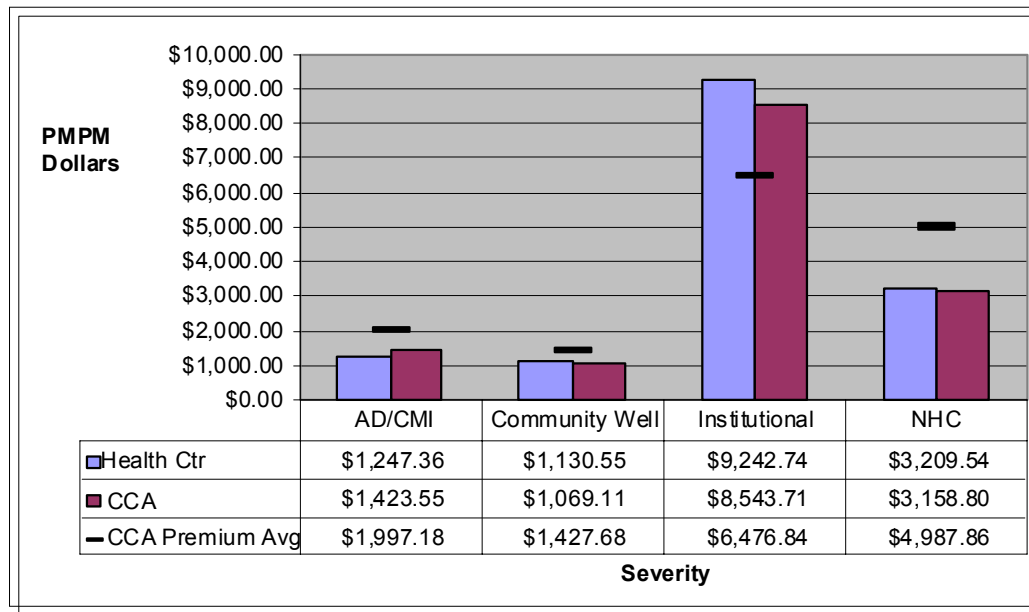
Exhibit 5 Senior Care Plan Case Mix Intensity, May 2005 to April 2006

Member Health Category	Member Months	Average Medicare Risk Score (Severity)
Alzheimer's disease or chronic mental illness	265	1.60
Community Well	2,459	1.44
Institutional	41	2.13
Nursing Home Certifiable	2,441	2.16
All	5,206	1.79

Source: CCA documents.

Exhibit 6 Total Medical Expenses from Sample Senior Care Plan Primary Care Site Report

Total Medical Expenses Per Member Per Month, June 2006 to May 2007



Source: Site Report for Senior Care Plan Primary Care Site, CCA.

Exhibit 7 Senior Care Plan Expenses by Severity Level

	Alzheimer's/Chronic Mental Illness	Community Well	Institutional	Nursing Home Certifiable
Acute hospital inpatient	6%	15%	7%	18%
Adult day health	7%	4%	0%	4%
Ancillary expenses (diagnostic lab testing, radiology)	2%	2%	1%	1%
Certified home health care agency	1%	5%	1%	5%
ER	0%	1%	0%	1%
Other (DME, ambulatory surgery, other outpatient, dental, mental health, etc.)	24%	24%	7%	14%
PC homemaker	6%	6%	1%	5%
Personal care attendant	4%	2%	1%	20%
Pharmacy	29%	24%	2%	11%
Primary care	16%	9%	2%	12%
Skilled nursing facility	0%	1%	76%	4%
Specialty care	5%	7%	1%	4%
Total cost	100%	100%	100%*	100%*

Source: CCA documents.

*Note: Due to rounding, percentages sum to 99%.

Exhibit 8 Performance Metrics by Primary Care Site, Sample Site versus CCA Overall

		CCA Overall		Site X	
		2005-2006	2006-2007	2005-2006	2006-2007
Diabetes					
	HbgA1c test	89%	83%	100%	88%
	Retinal scan	69%	62%	75%	71%
	Podiatry visit	33%	30%	18%	15%
	Lipid profile	76%	79%	81%	85%
Congestive Heart Failure					
	ACE inhibitors	56%	43%	63%	58%
	Lipid profile	69%	65%	88%	69%
	# hospitalized with CHF	7	33	3	15
	% hospitalized	N/A	13%	N/A	22%
	Rate of CHF hospitalizations/1,000 member years*	14.8	33.65	16.7	55.72
Depression					
	Antidepressants	64%	N/A	67%	N/A
Coronary Artery Disease					
	Lipid profile	81%	N/A	89%	N/A
	Blood glucose screen	52%	N/A	70%	N/A

Source: CCA documents.

* Massachusetts benchmark for residents 65 and older was 21.1

Note: Site X was a large primary care provider in the CCA network.

Endnotes

¹ Adapted from Master, Robert J., "Massachusetts Medicaid and the Community Medical Alliance," *The American Journal of Managed Care*, Vol. 4, Special Issue, June 25, 2998.

² We utilize *Medicaid: A Primer*, The Henry J. Kaiser Family Foundation, 2007 as the source of much of the basic information about the Medicaid program.

³ We utilize *Medicaid: A Primer*, The Henry J. Kaiser Family Foundation, 2007 as the source of much of the basic information about the Medicaid program.

⁴ "Dual Eligibles: Medicaid's Role for Low-Income Medicare Beneficiaries," Kaiser Commission on Medicaid and the Uninsured, July 2005.

⁵ Vladeck, Bruce C., Testimony on Long Term Care Options: PACE and S/HMO, Before the House Ways and Means Subcommittee on Health, April 18, 1996.

⁶ State Coverage Initiatives, *Dual Eligibles: Integrating Medicare and Medicaid*, Revised 2/8/01 <http://www.statecoverage.net/statereports/or11.pdf>, Accessed December 20, 2007.

⁷ Skilled nursing facilities referred to a level of typically short-term, institutional care traditionally covered by Medicare. In contrast, long-term nursing home was covered by state Medicaid programs but not Medicare.

⁸ Medicare aimed to risk-adjust payments for virtually all Medicare Advantage plans in 2007, up from 75% in 2006.

⁹ Department of Health & Human Services press release, "More Beneficiaries Participate in Medicare Advantage After Plan Approvals in 2005," February 21, 2006, http://www.raconline.org/news/news_details.php?news_id=3926, Accessed December 19, 2007.

¹⁰ Texas Department of Insurance website, "Medicare prescription drug coverage (Medicare Part D)," <http://www.tdi.state.tx.us/consumer/hicap/medicarepartd.html>, Accessed November 29, 2007.

¹¹ "Beneficiaries with Special Needs Can Get Help From Medicare Managed Care Plans," CMS Press Release, November 8, 2005, <http://www.cms.hhs.gov/apps/media/press/release.asp?Counter=1720>, Accessed June 22, 2007.

¹² "Special Needs Plan – Fact Sheet & Data Summary," Department of Health and Human Services, CMS, February 14, 2006.

¹³ Centers for Medicare and Medicaid Services, "Special Needs Plan: Fact Sheet and Data Summary" <http://www.cms.hhs.gov/SpecialNeedsPlans/Downloads/FSNPFACt.pdf>, Accessed January 2, 2008.

¹⁴ CCA documents, from CMS 7/26/06 annual enrollment report by plan.

¹⁵ The International Statistical Classification of Diseases and Related Health Problems (ICD), published by the WHO, provided codes to classify diseases and a variety of symptoms and external causes of injury and disease. DRGs were assigned based on ICD diagnoses, procedures, age, sex, and the presence of complications or co-morbidities.

¹⁶ The Social Security Administration provided Supplementary Security Income cash benefits to elderly, blind, and disabled adults and children on the basis of financial need. The SSI income eligibility standard was 74% of the federal poverty level.

¹⁷ Kaiser Commission on Medicaid and the Uninsured, "Benefits by Service: Home Health Services," *Medicaid Benefits: Online Database*, October 2006, <http://www.kaiserkfamilyfoundation.org/medicaid/benefits/index.jsp>, Accessed December 19, 2007.

¹⁸ “Dual Eligibles: Medicaid’s Role for Low-Income Medicare Beneficiaries,” Kaiser Commission on Medicaid and the Uninsured, July 2005.

¹⁹ Master, Robert J. and Catherine Eng, “Integrating Acute and Long-Term Care for High-Cost Populations,” *Health Affairs*, November/December 2001.

²⁰ Congressional Budget Office, “Appendix B: Recent Policy Initiatives Affecting Long-Term Care Financing,” *Financing Long-Term Care for the Elderly*, April 2004 <http://www.cbo.gov/ftpdoc.cfm?index=5400&type=0&sequence=6>, Accessed November 30, 2007.

²¹ Ibid.

²² On Lok Lifeways website, “About On Lok: History,” <http://www.onlok.org/SeniorHealth/content.asp?catid=240000182&scatid=240000192>, Accessed November 30, 2007.

²³ National PACE Association, *2006 PACE Census and Enrollment Report*, www.npaonline.org, Accessed January 2, 2008.

²⁴ MassHealth: Senior Care Options (SCO) Medicare/Medicaid Demonstration Fact Sheet.

²⁵ CCA documents.

²⁶ <http://www.statehealthfacts.org>, Accessed June 22, 2007.

²⁷ Clark, William D. et al, Medicare Special Needs Plans: Lessons From Dual-Eligible Demonstrations for CMS, States, Health Plans, and Providers, March 2007.

²⁸ CCA documents.

²⁹ <http://www.massresources.org/pages.cfm?contentID=87&pageID=30&Subpages=yes#whatis> Accessed August 17, 2007.

³⁰ The General Laws Of Massachusetts, Part I, Title XVII, Chapter 118E, Section 9D: Senior Care Options initiative.

³¹ Centers for Medicare and Medicaid Services, *State Guide to Integrated Medicaid & Medicare Models*, March 2006.

³² State Coverage Initiatives, *Dual Eligibles: Integrating Medicare and Medicaid*, Revised 2/8/01 <http://www.statecoverage.net/statereports/or11.pdf>, Accessed December 20, 2007.

³³ Anderson, Gerard and James R. Knickman, “Changing the Chronic Care System to Meet People’s Needs,” *Health Affairs*, Volume 20, No. 6, November/December 2001.

³⁴ Center for Medicare Advocacy, Inc., *Medicare Cost Sharing in Medicare Advantage Plans: Who Pays for Dual Eligibles*, May 31, 2007, http://www.medicareadvocacy.org/AlertPDFs/2007/07_05.31.MAMcaidCostShare.pdf, Accessed December 20, 2007.

³⁵ Kaiser Family Foundation, Total Dual Eligible Enrollment in Medicaid Managed Care, as of June 30, 2006 <http://www.statehealthfacts.org/comparetable.jsp?cat=4&ind=220&typ=1&gsa=1>, Accessed December 21, 2007

³⁶ Arnst, Catherine, “The Right Cure for Ailing Elder Care?” *Businessweek*, June 11, 2007.

³⁷ Anderson, Gerard and James R. Knickman, “Changing the Chronic Care System to Meet People’s Needs,” *Health Affairs*, Volume 20, No. 6, November/December 2001.

³⁸ Mollica, Robert L. and Jennifer Gillespie, *Care Coordination for People with Chronic Conditions*, Partnership for Solutions, January 2003.

³⁹ Anderson, Gerard and James R. Knickman, "Changing the Chronic Care System to Meet People's Needs," *Health Affairs*, Volume 20, No. 6, November/December 2001.

⁴⁰ Anderson, Gerard and James R. Knickman, "Changing the Chronic Care System to Meet People's Needs," *Health Affairs*, Volume 20, No. 6, November/December 2001.

⁴¹ U.S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1971. Washington, DC: Government Printing Office: 1971:71.

⁴² Master, Robert J., et al, "A Continuum of Care for the Inner City," *New England Journal of Medicine*, June 26, 1980.

⁴³ Glover, Mary, Robert J. Master, and Allan R. Meyers, "Boston's Community Medical Group and the Community Medical Alliance Health Plan," *American Rehabilitation*, Vol. 22, Issue 3, Autumn 1996.

⁴⁴ Tobias, Carol, Jan Levinson and Lois Simon, "Reinventing the HMO: The Next Generation of Medicaid Managed Care," Center for Health Care Strategies, Inc. Resource Paper, August 2005.

⁴⁵ For the 40% of SCP members determined to be nursing-home eligible, Medicare reimbursement levels were calculated using a combination of the individual Medicare Advantage risk scores and a separate, fixed "frailty adjuster" of 2.39. The 2.39 frailty adjuster was historically applied to all enrollees regardless of health status. As Special Needs Plans moved towards individually risk-adjusted payments, the frailty adjuster accounted for an annually decreasing proportion of each member payment, and was scheduled to phase out completely in 2009.

⁴⁶ The Older Americans Act established a system whereby authorized program funds flowed through State Units on Aging (in Massachusetts, the State Unit on Aging was the Executive Office of Elder Affairs) to Area Agencies on Aging where they were used to support home- and community-based support and nutrition services for eligible elders. In Massachusetts, Area Agencies on Aging provided services together with another group of entities known as Aging Service Access Points (ASAPs). ASAPs were funded by the Older Americans Act, the state Executive Office of Elder Affairs, and Massachusetts Medicaid, and were often but not always co-located with AAAs. http://www.mass.gov/?pageID=mg2modulechunk&L=1&L0=Home&sid=massgov2&b=terminalcontent&f=serviceorgs_aaa&csid=Elders, Accessed March 28, 2008. <http://www.chcpf.state.co.us/HCPF/icfp/advcomm/000127handout3.asp>, Accessed March 28, 2008.

⁴⁷ Medicare Special Needs Plans: Lessons from Dual-Eligible Demonstrations for CMS, States, Health Plans, and Providers, http://www.medicareadvocacy.org/SNP%20Conference/BackgroundInfo/BishopEtAl_2007.MedicareSpecialNeedsPlans_LessonsfromDualEligibleDemonstrationsForCMSStatesHealthPlansAndProviders.pdf, Accessed January 2, 2008.

⁴⁸ MCOL Quarterly Report, August 2006, <http://www.mcol.com/qrep206.pdf>, Accessed August 21, 2007.